WR-35 Rev (9-11)

State of West Virginia Department of Environmental Protection Office of Oil and Gas Well Operator's Report of Well Work

DATE:	10/7/12		
API#:	47-039-05763	F	

Farm name: Pugh			Operator	r Well No.: Pu	ıgh #2	
LOCATION: Elevation: 883.19			Quadran	gle: Pocatalico)	
District: Union			County:	Kanawha		
Latitude: 7100	Feet South of :	38 Deg.	a7 ·	Min. 30	Sec.	
Longitude 🕳 وه و 🏖	Feet West of	8ℓ Deg.	40	Min. OO	Sec.	

Address: 8113 Sissonville Drl	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Charleston, WV 25320				
Agent: Michael Pinkerton				
Inspector: Terry Urban	13 3/8"	30'	30'	225-sx
Date Permit Issued: 11/30/2011	9 5/8"	300'	300'	225-sx
Date Well Work Commenced: 5/10/12	7"	2008'	2008"	150-SX
Date Well Work Completed: 6/10/12	4 1/2"	4,500'	4,500'	250-SX
Verbal Plugging:				
Date Permission granted on:				
Rotary Cable Rig				
Total Vertical Depth (ft): 4,922			<u> </u>	
Total Measured Depth (ft): 4,922				
Fresh Water Depth (ft.): 130				
Salt Water Depth (ft.): 1300				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s) N				

Producing formation Berea		Pay zone de	epth (ft) 2374-2382	
Gas: Initial open flow 20	MCF/d C	Dil: Initial open flow 0	Bbl/d	
Final open flow 20	MCF/d	Final open flow 0	Bbl/d	
Time of open flow between	een initial ar	nd final tests 24	Hours	
Static rock Pressure 250	psig (sur	face pressure) after 24	Hours	
6 1 1 2 2 6 2 2 2 2	- Welch	Pay zone dent	th (ft) 2270-2330	
Second producing formation	11 110.0	I ay zone depi	(10)	
Gas: Initial open flow 20		Dil: Initial open flow 0	Bbl/d	RECEIVED WV DEP
•				RECEIVED WV DEP
Gas: Initial open flow 20	MCF/d C MCF/d	Oil: Initial open flow 0 Final open flow 0	Bbl/d	, 1000

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Muhal Kinkertor Signature

12/14/2012

Were core samples taken? Yes No	ο <u>X</u> υ	ere cuttings caught d	uring drilling? Yes	No_N
Were Electrical, Mechanical or Geophysica Set a retrievable pl	al logs recorded on this wel	l? If yes, please list_	Photo Density Log	
NOTE: IN THE AREA BELOW F FRACTURING OR STIMULATING, I DETAILED GEOLOGICAL RECOR COAL ENCOUNTERED BY THE WE	PHYSICAL CHANGE, E D OF THE TOPS AND	TC. 2). THE WELL BOTTOMS OF A	LOG WHICH IS A SY ALL FORMATIONS,	YSTEMATIC
Perforated Intervals, Fracturing, or Stimula	_			
Perforate Berea w/16 shots from 237	<u></u> _			
as per enclosed schedule. Flush w/30		3/4 ball after 2 bbl	s acid) & 28.9 bbls tr	eated water,
land ball on 3.562 baffle @ 2342' K				
Perforated Welch w/13 shot (SF) from 227			timulation as per enlclos	ed schedule.
Flush 1 bbl short of top perf SD tak	e ISIP 5 min and 10 n	nin		
Plug Back Details Including Plug Type and	d Depth(s): Set a retriev	vable plug below	the Berea fracked	formation.
Set another retrievable plug below the				
Formations Encountered:	Top Depth	/	Bottom]	<u>Depth</u>
Surface:				
Attachuel				
			:	

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State of West Virginia **Department of Environmental Protection** Office of Oil & Gas

Operators well name:	Pugh # 2	
Farm Name:		
Company:		

GEOLOGICAL RECORD

Description:	Тор	Bottom
Clay/ sand	0	9
Sand/shales/silt	9	610
Sandy shales	610	718
Silty sand	718	800
Shale/sand/silts	800	1200
Salt Sand	1200	1531
Shale	1531	1600
Sand / some shaley stringers	1600	1750
Lime	1750	1780
Big Lime	1780	1950
Injun	1950	1931
Sandy shales	1931	2352
Cofffe shale	1931	2373
Berea	2373	2381
Shale	2381	3591
Huron shale	3591	4320
Shale	4320	4560
Rhinestreet	4560	4814
Shale	4814	4840
Marcellus Shale	4840	4902
Onandaga	4902	4923

Additional Comments:

Marcellus 1st Stg: Perforated w/ 22 shots (SF) 4846 - 4898' KB. (300 gal 10% Hcl). Total N2 - 902 mcf. Stg 2 Rhinestreet. Perf w/ 20 shots (SF) from 4622 - 4734' KB. Pump 350 gal 7 1/2% Hcl acid. 800 mcf N2. Stg 3 Huron/Dev. Shale. Perforate w/ 51 shots (SF) 3080 - 4166' KB. Pump 500 gal 7 1/2% Hcl acid. Total N2 Stg 4 1,001.6 mcf.

Berea; perf w/ 16 shots from 2374 - 2382' KB. 75Q foam. 350 gals 15% Hcl acid. Could not get frac ball to hold. SD. Did not treat.